William Ayers (University of Central Florida)

A Theory of Music as Distraction in Video Games

In his thesis from 2006, Jenova Chen describes a design philosophy for video games that applies Mihaly Csikszentmihalyi's concept of "flow," a state that promotes "optimal experience" for the player by aligning game challenges with their current abilities. As Chen notes, gradually increasing challenges to align with a player's skills can avoid undesired states of boredom or anxiety. While this philosophy has been used to discuss level design and immersion in games, the effects of *musical* design on this "flow state" have not been extensively examined. This paper will present a new theory of "music as distraction" in video games, demonstrating that changes to particular musical parameters can serve to divert a player's attention and thereby promote or inhibit a state of flow.

While the term "distraction" generally carries a negative connotation, this paper considers the concept more broadly, espousing three basic definitions of distraction, each associated with different musical situations in video games: (1) something that catches attention, such as a musical marker in a game world, (2) a diversion or amusement, such as an optional musical task, and (3) an agitation or frenzy, as in situations when music is too intense for a player to concentrate. While distractions can work against a state of flow, they can also encourage it by shifting a player's focus away from outside influences (unrelated preoccupations, personal emotions, etc.) and toward gameplay objectives. This paper will examine the distracting influences that music can have on multiple styles and genres of gameplay.

Eli Badra

Surrender to the Flow: Psychedelia in Videogame Music

Although there are numerous examples of psychedelia-influenced imagery in videogames (i.e., *Earthbound, Katamari Damacy, LSD: Dream Emulator*), the same consideration is seldom given to music. I would like to explore the ways that composers have utilized psychedelic music and sound design to enhance the gameplay experience.

In the book *Sixties Rock: Garage, Psychedelic, and Other Satisfactions*, author Michael Hicks proposes that successful psychedelic music mimics three prominent effects of LSD: dechronicization (movement beyond conventional perception of time), depersonalization (the loss of one self and the sense of a larger universal unity), and dynamization (in which "familiar forms dissolve into moving, dancing structures").

I intend to talk about music that is overtly psychedelic, such as the use of psychedelic rock in *Spec Ops: The Line*, or the dynamic soundtracks of games like *Rez* and *Lumines*, as well as how composers use the above-mentioned criteria in their own compositions to throw player expectations a bit off-kilter. For instance, Gustavo Santaolalla's "Home" comes at the end of *The Last of Us*, consisting of little more than a tonal drone that eventually gives way to a fuzzy, slightly detuned guitar solo: all of the makings of Americana music, delivered at the end of Joel and Ellie's cross-country road trip, delivered through the broken lens of what has transpired.

I hope to demonstrate that psychedelia refers to more than simply "drug music," and to show that it can be a powerful force in videogame composition.

Joseph Jakubowski (Harvard University)

Meter as Mechanic: Audio-Visual Coordination and Beat Difficulty in *Crypt of the Necrodancer*

Brace Yourself Games' *Crypt of the Necrodancer* (2015) merges rhythm game and roguelike mechanics in a dungeon crawler setting. Players coordinate their movements with the beat of Danny Baralsky's EDM-inspired soundtrack, while avoiding and/or attacking enemies that also move with the beat. The challenge comes from making decisions in short, isochronous timeframes, promoting movement as a learned "skill" in place of the esoteric knowledge and planning associated with turn-based roguelikes (Williams 2013; Clark 2014).

This talk examines meter, beat, and gameplay in *Crypt of the Necrodancer*. I focus on two issues: 1) the coordination of auditory and visual entrainment, and 2) the relation of beat complexity to difficulty. To be successful, players must entrain to an auditory stimulus (the backing track) and match that meter to visual information (the periodic movements on the screen). The relative strength of the auditory system in this regard allows players to automate the timing of their responses and focus on the more complex and rapidly changing situations unfolding on screen. I analyze a segment of recorded gameplay in these terms, considering how players relate entrained meters to onscreen events—and sometimes fail to do so. Second, I characterize difficulty as a function of

beat complexity.[1] In analysis of three contrasting tracks ("Mausoleum Mash," "Konga Conga Kappa," and "Last Dance"), I show how genre, beat style, and the use of syncopation and distractor rhythms musically increase the challenge of later levels.

[1] Previous authors note the effects of tempo and rests on gameplay (Kuchera 2013).

References:

Clark, Ryan. 2014. "Game Design Deep Dive: Finding the Beat in *Crypt of the Necrodancer*." *Gamasutra*, published 17 September 2014. Accessed 11/15/19: https://www.gamasutra.com/view/news/225547/Game_Design_Deep_Dive_Finding_the_beat_in_Crypt_of_the_NecroDancer.php.

Kuchera, Ben. 2013. "A roguelike that's a rhythm game? Jesus Christ, FINALLY!" *The Penny Arcade Report*, published 9 September 2013. Accessed 11/15/19: https://web.archive.org/web/20131231030452/http://penny-arcade.com/report/article/a- roguelike-thats-a-rhythm-game-jesus-christ-finally.

Williams, Mike. 2013. "Dance Yourself to Death with Crypt of the Necrodancer." *US Gamer*, updated 26 June 2013. Accessed 11/15/19: https://www.usgamer.net/articles/ dance-yourself-to-death-with-crypt-of-the-necrodancer.

Alan Elkins (Florida State University)

Musical Form and Gameplay Context in the Japanese Role-Playing Game

The music of role-playing games (RPGs) has been a frequent site of exploration for scholars of video game music in recent years—especially Nobuo Uematsu's soundtracks for the *Final Fantasy* series. Many authors have addressed the ways that polyphonic development (Greenfield-Casas 2016), thematic/motivic recall (Kizzire 2014, Atkinson 2019), and musical topic (Gallagher 2018) may inform interpretation of musical meaning in RPGs; relatively little attention has been paid, however, to the means by which musical form may create or reinforce these interpretations.

Building upon recent expansions to *Formenlehre* theory (Richards 2011, Vande Moortele 2011) and their application to video game music (Schartmann 2018), I argue that musical form aids in differentiating musical spaces in the early *Final Fantasy* entries and other Japanese RPGs. The bulk of music in early role-playing titles can be divided into four categories: town music, overworld exploration music, dungeon music, and battle music. Town music tends to be the most likely site for period structures and authentic cadential closure, which provide a sense of musical balance and rest largely absent from other theme types. Overworld themes, on the other hand, are more likely to consist of sentential

structures, which are inherently characterized by what Vande Moortele calls a "forward orient and dynamic character"; this is especially true of Uematsu's airship themes. Dungeon themes are often characterized by tonally static or ambiguous harmonies and a lack of functional harmony, as well a significant amount of internal repetition; battle themes retain some, but not all, of these characteristics.

Liam Hynes-Tawa (Yale University)

Traditional Japanese Modes in Video Game Soundtracks

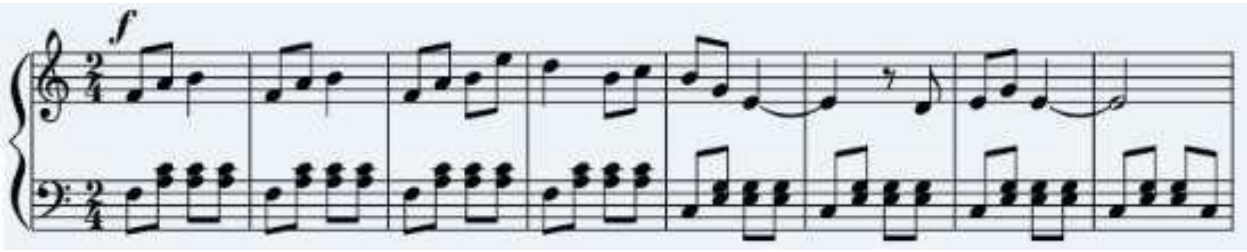
Game music composers in Japan are, like most other musicians in Japan, trained primarily in the use of Western tonality, just as musicians in the West are. But growing up in Japan does nevertheless expose one to various traditional musics as well, and so some of the scales that predate the arrival of Western tonality in Japan end up being available as compositional resources to Japanese composers of nearly all genres.

These are not resources that are called upon very often in most video games, though they are worth learning to recognize because of the affective meanings they often encode. I begin this paper with a brief introduction to Japanese tetrachordal theory, which has been acknowledged as the most productive way to analyze Japanese

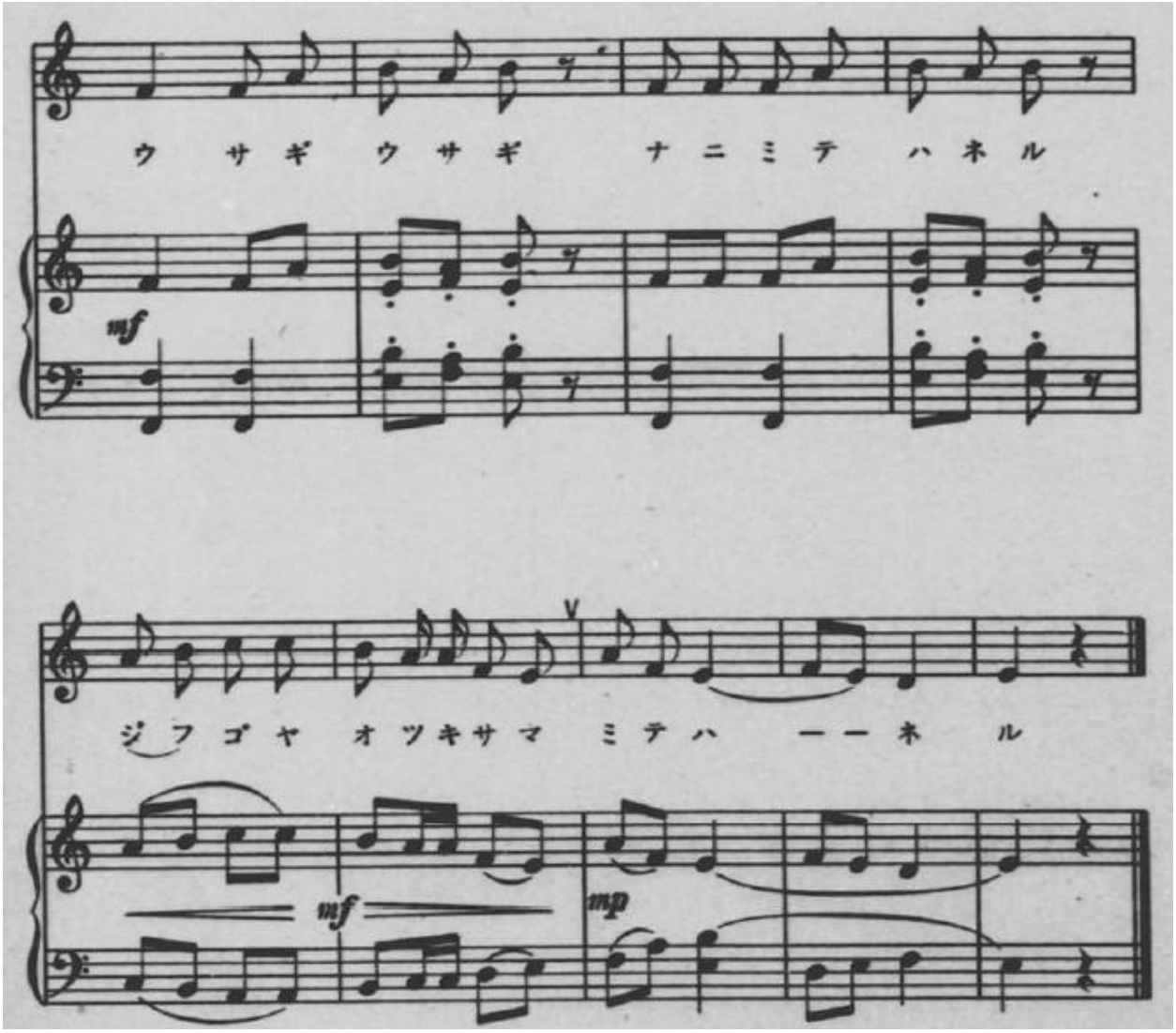
traditional music since the 1950s,[1] and then demonstrate some examples from Sakai Shōgo's score to *Mother 3*, because its uses of traditional scales are quite obviously deliberate, and in one case even parodic. From there I proceed to less obvious cases from *Pokemon* and *Yume Nikki*, and eventually a few edge cases in which a traditional scale

cannot be said to be in use literally (see ex. 1), though having it in our analytical toolbox will allow us a fuller understanding of the many forces acting on the music in question.

Example 1a. Koji Kondo, "Lost Woods," from *The Legend of Zelda: Ocarina of Time*



Example 1b. Traditional, *Usagi usagi*, arrangement in *Uta no hon* (published 1941), in the traditional *miyakobushi* mode



[1] Koizumi Fumio □□□□. *Nihon dentō ongaku no kenkyū* □□□□□□□□□ [Research on Japanese traditional music]. Tokyo: Ongaku no Tomo Sha, 1958.

Aaron Price

From Grinding to Grooving: An Investigation of Motoi Sakuraba's RPG Combat Music

In role-playing games (RPGs) many players repetitively battle enemies in order to advance their characters, a process often referred to as grinding. While grinding, players will hear the same combat music hundreds or even thousands of times. Despite often being highly percussive and energetic, Stephen Armstrong found that the music heard while grinding instills a sense of stasis through repetitive melodic figures and stationary tonal centers. This sense of stasis in the music, which Armstrong calls musicospatial stasis, reflects the gameplay state of being temporarily removed from the exploratory or narrative space until the battle is complete.

Although musicospatial stasis is extremely common in RPG combat music, the music of Motoi Sakuraba is a notable exception: his combat compositions contain limited repeated material, fast-paced harmonic changes, and varied tonal centers. I investigate how these elements of Sakuraba's music correlate with scientific studies of groove phenomenology (the subconscious desire for the body to move with music) and how they could create further kinesthetic interaction with the gameplay. Additionally, I examine how Sakuraba's use of

syncopations, appoggiaturas, and suspensions both create and then subvert listener expectation, whereas many other combat themes tend to be more predictable in rhythm and harmony. I then demonstrate how these elements of groove and subverted expectation in Sakuraba's compositions fit within established theoretical metrics and models for measuring gameplay immersion. This analysis reveals that despite not creating musicospatial stasis, Sakuraba's combat music is functional in utilizing groove and subversion to create further immersion in the grinding experience.

Karen Cook (University of Hartford)

Jun Chikuma's Soundtrack for *Faxanadu* (1987)

Faxanadu is an action-adventure role-playing game released by Hudson Soft in 1987. It was well received, ranking #6 in Nintendo Power's top 30 games, but was soon forgotten (except by its die-hard fans) until its port to the Wii virtual console in 2010. Its soundtrack was composed by Jun Chikuma, whose work for the *Bomberman* series often appears in "hidden video game music gems" lists but, like *Faxanadu* itself, has also been overlooked.

In this presentation, I discuss how Chikuma's soundtrack both aligns with and pivots away from then-burgeoning sonic expectations for action RPGs, and video games writ large. (Gibbons & Reale 2019) Like other contemporary composers, she utilizes familiar fantasy and medievalist musical tropes. (Cook 2019) But she makes heavier use of mode mixture and chromatic melodies, and she avoids stasis in looped themes by layering new melodic or contrapuntal material. More unusual are her treatments of the triangle channel, which occasionaly has the melody, and the noise channel, which contains a surprising variety of rhythmic patterns and fills. Whereas an RPG town theme is often simple, calm, pastoral, and melodic, Chikuma's is syncopated, angular, and energetic. (Gibbons 2017) Lastly, her final

boss theme inverts musical material heard earlier in the game, shaping the soundtrack into a giant arch form. Her soundtrack is thus not only a fascinating case study in its own right, but also an alternative approach to scoring video games at a time when recognizable game music tropes were beginning to coalesce. (Plank 2019)

Dominic Arsenault (Université de Montréal)

Sound Chips and Video Game Music, Beyond Hardware and Software:

The Research-Creation Process Behind the Aesthetics of Chipmetal and the VRC666 Mindware

Early video game music relied on sound chips, whose technical intricacies constrained the range of expressive possibilities and shaped the development of video game music (Collins 2008, Fritsch 2013, Höltgen 2018). Specific musical genres (REDACTED 2012), styles (Lerner 2013) and motifs (Hopkins 2015) bloomed therein, with distinct schools of practice forming around specific techniques or approaches to video game music composition. Contemporary musicians in the chiptune scene since use, replicate or expand on these practices, making the production of chiptunes a site of struggle between conflicting conceptions of authenticity and nostalgia (Tomczak 2008, Polymeropoulou 2014, Reid 2018). First-generation purists valued original hardware tools, while others were more liberal about software emulators and modern DAWs, extending into "chip-inspired" or "fakebit" music.

Against this backdrop, I will present my musical project that has been caught between the hard walls of two scenes, that of chiptunes and [REDACTED GENRE], and for which I released a first full-length album in 2020. I will describe the research-creation process (Chapman & Sawchuk 2012) that led the quest for attaining a new, hybrid sound, and a compositional approach that negotiates the trappings of the authenticity question. The process coalesced into an analytical decoupling of the technical constraints, compositional techniques,

aesthetic figures, and sonic soundscapes involved in both musical genres, which were reforged into neither hardware nor software, but "mindware" (Perkins 1995): a strict set of virtual possibilities, affordances and self-imposed constraints acting as an imaginary soundchip and instrument [REDACTED from title].

Indicative bibliography

[REDACTED] Anonymous Author & Nameless Colleague (2012). "Paper discussing ties between video game music and a specific musical genre", *Unidentified international peer-reviewed journal*.

CHAPMAN, Owen & Kim Sawchuk (2012). "Research-Creation : Intervention, Analysis and 'Family Resemblances'", *Canadian Journal of Communication*, 37(1), 5-26.

COLLINS, Karen (2008). *Game Sound : An Introduction to the History, Theory, and Practice of Video Game Music and Sound Design*. Cambridge (MA) : MIT Press.

FRITSCH, Melanie (2013). "History of Video Game Music", in *Music and Game. Perspectives on a Popular Alliance* (P. Moormann, ed.), p.11-40. Berlin : Springer VS.

HOPKINS, Christopher J. (2015). *Chiptune Music : An Exploration of Compositional Techniques as Found in Sunsoft Games for the Nintendo Entertainment System and Famicom from 1988-1992*. Ph.D. thesis (adv. S. Briody), Five Towns College.

HÖLTGEN, Stefan (dec. 2018). "Play that Pokey Music : Computer Archeological Gaming with Vintage Sound Chips". *Computer Games Journal*, 7(4), 213-30. DOI : https://doi.org/10.1007/s40869-018-0068-5

LERNER, Neil (2013). "The Origins of Musical Style in Video Games, 1977-1983", in *The Oxford Handbook of Film Music Studies* (D. Neumeyer, ed.), 319-47. Oxford University Press : Oxford.

PERKINS, David (1995). *Outsmarting IQ : The Emerging Science of Learnable Intelligence*. Free Press / Simon & Schuster : New York.

POLYMEROPOULOU, Marilou (2014). "Chipmusic, Fakebit and the Discourse of Authenticity in the Chipscene", *WiderScreen*, 1-2. Retrieved online @ http://

widerscreen.fi/numerot/2014-1-2/chipmusic- fakebit-discourse-authenticity-chipscene/ (Nov. 26th, 2019)

REID, George (2018). "Chiptune : The Ludomusical Shaping of Identity", *Computer Games Journal*, 7(4), 279-90. DOI : https://doi.org/10.1007/s40869-018-0070-y

TOMCZAK, Sebastian (2008). "Authenticity and Emulation: Chiptune in the Early Twenty-First Century", in *Proceedings of the 2008 International Computer Music Conference*, Michigan Publishing.

Kurt Werner (iZotope, Inc.)

New Textures for 1-Bit Audio Effects and Synths

The purpose of this talk is to present my new designs for 1-bit synthesizers, audio effects, and signal mixers that leverage techniques from audio DSP, control systems engineering, and psychoacoustics to transcend the classical limitations of the 1-bit format, creating new possibilities for musical expression. The sonic capabilities of many early computers (Apple IIe, Sinclair ZX Spectrum, &c.) were extremely limited: a single digital CPU pin wired directly to a speaker or audio jack. Traditionally, these "1-bit" audio systems (also sometimes called "beepers" or "PC beepers") have used only a narrow range of timbres: mainly square waves, pulse waves, and impulse trains. The mathematical operation of addition does not exist in the 1-bit domain, making it difficult to layer sounds or implement standard linear time-invariant audio effects like filtering, EQ, echo, reverb, or even gain control.

After reviewing some of the classical examples of 1-bit music, I will describe my novel approach to designing novel 1-bit musical tools. These include, e.g., 1-bit stochastic wavetables, 1-bit resonant and comb filters, 1-bit artificial reverberation, advanced multiplexor- and digital-logic-based signal mixers, and advanced binary bitcrushers. Special emphasis will be placed on a new variant of sparse noise I developed called "Crushed Velvet Noise," which is especially useful for 1-bit music. Finally, I will give a demonstration of my approach to composing 1-bit music in a modern DAW (Ableton Live) and present a soon-to-be released library of Max for Live / Gen~ devices for supporting that workflow.

Kevin Burke (Florida Institute of Technology)

Konami's 8-Bit Shadow: The MSX Team and the Sound Creative Chip (SCC)

The MSX barely touched North American shores in the 1980s, yet Konami's game development for this home computer standard is deeply intertwined with that for the Famicom (and Nintendo Entertainment System). While Nintendo's home console was superior in terms of graphics and audio, as well as in sales, the open architecture of the MSX was fertile ground for innovation. As famed Metal Gear creator Hideo Kojima has attested, Konami's MSX division ranked below those of the home console and arcade divisions in resources and prestige, but there were fewer barriers to taking risks because the stakes were lower. It was these conditions that inspired sound engineer Kazuhiko Uehara to create the Sound Creative Chip (SCC), which expanded the audio capabilities of the MSX's generic PSG by adding five channels of wavetable synthesis. This paper introduces several key characteristics of Konami's SCC chip and MSX development from 1987–1990 that subsequently played a significant role in Konami's soundtracks for the Famicom.

Musical examples from *Gradius 2* (1987), *Space Manbow* (1989), and *Metal Gear 2: Solid Snake* (1990) illustrate techniques of bi-timbrality, waveform modulation, and cross-channel echo that would come to proliferate Konami's late Sound Driver for the Famicom in the

early 1990s. Furthermore, interviews with Hideonori Maezawa and Atsushi Fujjio reveal the influence the SCC chip had on their development of the VRC6 and VRC7 expansion audio, respectively, for the Famicom. Finally, a consideration of the MSX music and sound team credits suggests that this innovative culture was an ideal springboard for launching many successful careers within Konami and beyond.

Michael Philip Bridgewater (Newcastle University)

Keeping Up with the Commodore: SID Music in the Demoscene and Contemporary Commodore 64 Game Development

The Commodore 64 home computer, originally released in 1982, is well-known for its powerful and versatile sound chip, the SID (Sound Interface Device). The sound of the SID, with its range of waveform types, filtering capabilities, ring modulation function, and hard sync function, facilitated a remarkable degree of artistry on otherwise unexceptional games for the platform, and made 8-bit legends out of composers like Rob Hubbard.

As a steady stream of software was released for the Commodore 64 throughout the 1980s, groups of pirates known as crackers competed to be the first to remove the copy protections of new titles and distribute their own versions that included intro screens featuring their logos and coded effects while playing SID tunes ripped from previously-released games. Over time, these intros evolved into standalone creative productions known as demos, combining complex effects and striking graphics with original SID tunes by the cracking groups' music specialists.

Although the Commodore 64's commercial life expired in the early 1990s, the demoscene built around it continues to thrive, and many coders, artists, and musicians who make demos for the platform are now also using their skills to develop new games. My presentation will explore how this development constitutes a coexistence of 'technostalgia'

with contemporary creative sensibilities, with a focus on the practice of SID music composition.

Elizabeth Medina-Gray (Ithaca College)

"What Does Early Video Game Dialogue Sound Like?"

With highly restrictive technological limitations, early video games typically were not able to include realistic recordings of human voices. Yet a significant minority of early games do include some aural component of in-game dialogue. Some of these aural components *sound like* voices, albeit voices heavily mediated by technology; speech synthesis appeared in some arcade games beginning in the 1980s, and brief, low-resolution speech samples became increasingly prevalent in certain 16-bit games, for example. Some aural dialogue components *sound like* purely mechanical output, without a vocal element; such sounds can be either pitched or un-pitched, and they accompany the appearance of on-screen dialogue text. Some aural dialogue components—either vocal or non-vocal—can begin to *sound like* music.

This talk shares the results of a corpus study that examines the sounds of dialogue in early video games. Based on a corpus of over 200 titles—comprised of "best selling" and "most popular" games lists for early arcade, early home computer, and 8- and 16-bit home consoles, supplemented with additional examples—this study considers the following questions: (1) Approximately what proportion of highly successful early games include aural components for in-game dialogue? (2) What types of aural dialogue components appear in early games? (3) What trends or tendencies emerge from those sounds, for example in pitch range, rhythm, timbre, etc.? (4) In what ways might some of these sounds be considered musical? This study provides a foundational context in which to examine these sounds that occupy ambiguous, liminal spaces between voice, sound effect, and music, and between human and machine.

Neil Lerner (Davidson College)

Listening to *Pac-Man's* Maze of Melancholy

Recently described by Michael Newman as "the Beatlemania of Generation X," *Pac-Man* has been discussed by scholars in terms of its industry-shifting disruptions of gender norms: it was the first video game to achieve widespread popularity among female as well as male players. This presentation will focus on an unexplored aspect of its game design and procedural rhetoric, namely its labyrinthine gameplay. Pac-Man's maze can be read within a larger history of mazes and labyrinths that invests in them ideas of wandering, searching, melancholy, and amazement. *Pac-Man's* sounds and music, in particular the sound accompanying each time a ghost comes into contact with Pac-Man, deepen these symbols.

Christopher Greene (Tufts University)

Musical and Narrative Transformation in *Nier* and *Nier: Automata*

One of the richest, yet relatively unexplored areas of study in ludomusicology is the transformation of musical materials across multiple installments of a game franchise. Scholars have begun examining this issue in series including *Zelda* (Brame 2011) and *Final Fantasy* (Simon 2016). This paper examines the melodic and harmonic transformations between *Nier* (2010) and *Nier: Automata* (2017). *Nier: Automata* has proven a robust subject for academic study (Smith 2017; Greenfield-Casas 2019), though the question of game-

spanning musical development remains open. The musical transformations between Nier and Nier: Automata mirrors developments in character and story, while deepening and complicating the player's emotional connection to them.

Of central focus in this presentation are the pieces of music that are carried over between the two games: "Grandma (comp. Takahashi & Okabe)," "Dark Colossus (Okabe & Hoashi)," "Song of the Ancients (Okabe)," and "Emil (Hoashi)." Each of these cues have specific significance in relation aspects of narrative or characterization in the original *Nier* that carry over or transform in *Nier: Automata.* Drawing on theories of harmonic transformation in multimedia (Murphy 2012, Lehman 2018) and modular structure in games (Medina-Grey 2016), I will demonstrate that the musical metamorphoses in *Automata* directly relate to— and comment on— events in the game's story ("Grandma" and "Dark Colossus") or returning characters ("Song of the Ancients" and "Emil"). Furthermore, this paper acts as a first step in developing a model of video game musical analysis that prioritizes transformation as a theoretical category.

Brent Ferguson (University of Kansas) and TJ Laws-Nicola (Texas State University)

Idols of Mass Destruction: Music as a Weaponizing force in *Omega Quintet* (2014)

Omega Quintet (2014), an idol simulation and role playing video game released for the Sony Playstation 4, centers around the concept of weaponizing musical entities and apparatuses. In this presentation, we analyze the hyper-weaponization of music in *Omega Quintet* as an allegory for the commodification and consumption of popular music. We draw from the research of other ludomusicologists, such as William Cheng and Tim Summers, that

have previously examined the weaponization of music in other games. The story of *Omega Quintet* is set in a dystopian Japan overrun by monsters known as the Beep. Protagonist Takuto and his childhood friend, Otoha, join an organization that develops special idols to fight the Beep known as Verse Maidens. Idols are highly produced and marketed young Japanese entertainment personalities. Surviving members of humanity provide the fan base for the Verse Maidens. The Verse Maidens depend on fan support to fuel their powers. Battles in *Omega Quintet* feature an assortment of musical weaponization. Examples include Sound Weapons as the main conduit for physical attacks, each Verse Maiden possessing equippable songs to play during extended attack sequences known as Live Mode, and special joint attacks known as Harmonic Chains. The battles intrinsically connect to the Verse Maiden's music, taking the commodification of idols to such an extreme that they are simultaneously consumed and used as weapons. Presented as a duality of fragility and strength, beauty and brutality, art and war—the Verse Maidens are consumed in a complex system of cultural and narrative implications.

Michael Austin (Louisiana Tech University)

Beeps, Boops, and Boyz: Sonic Representations of Gay Men in Video Games

In his 2014 documentary film, *Do I Sound Gay?*, director David Thorpe examines the stereotypes surrounding the speech patterns of gay men, investigating what it means to have a "gay voice" or to "sound gay." While the vocal stereotypes explored in the film seem to be a fixture in popular culture, they also remain a subject for derision and a trigger for bullying and harassment, often causing gay men to internalize homophobia and resort to hyper-masculine sonic expressions of their own identity. These vocal stereotypes are often exploited in the aural representations of LGBTQIA+ characters in video games, where sometimes clichéd, and/or hackneyed voice acting, sound effects, and stereotypically "gay" music serve as sonic shorthand for the gay community.

In this paper, I consider the presence or absences of these vocal and musical stereotypes in video games with overtly gay themes, such as *My Ex-Boyfriend the Space Tyrant* (Up Multimedia 2013), *Coming Out on Top* (Obscurasoft, 2014), *Dream Daddy: A Dad Dating Simulator* (Game Grumps, 2017), and *The Tea Room* (Robert Yang, 2017), and *Gaydorado* (Moga Studios, 2018), and discuss their value as camp and as a vehicle for positive representations of gay men in videogames. I will also discuss the importance of these games for the exploration of identity and self- expression for the "gay-mers" that play them, and the ways in which fans of these games participate sonically in and beyond the community.

Thomas Yee (University of Texas at Austin and The University of Texas San Antonio)

Feminine Themings: the Construction of Musical Gendering in the Final Fantasy Franchise

In 2015, outraged Star Wars fans met the paucity of Rey toys with the hashtag #wheresrey. In 2019, Marvel's female-starring blockbuster *Captain Marvel* received a barrage of targeted negative feedback prior to release. Gender representation in media matters, both as a symptom of societal views on gender and as a force teaching what gendered characteristics are culturally acceptable. Analysis of film music—such as Princess Leia's and Rey's themes in *Star Wars*—reveals how musical signification shapes perceptions of a character's gender. However, ludomusicological research on gender representation remains nascent, and the seminal *Final Fantasy* franchise constitutes promising ground, featuring landmark titles throughout video game history. "Feminine Themings: the Construction of Musical Gendering in the *Final Fantasy* Franchise" explores topical-stylistic strategies for constructing gender in character themes from across the twenty-three-year-old series.

By invoking scholarship in feminist musicology (McClary 1991, Laing 2007), gender studies (Suzanne Scott 2017, Kishonna Gray et al. 2018, Messerschmidt 2018, Frühstück 2011), and musical agency (Hatten 2018, Cumming 2000, Larson 2012), I argue that although the

musical themes of protagonists in earlier *Final Fantasy* titles reinforce traditional gender stereotypes, two recent entries present alternative gender archetypes that promise nuance in future representation. Characters studied range from Rosa, Cecil (*Final Fantasy IV*), Rinoa, Squall (*Final Fantasy VIII*)—whose themes utilize conventionally-gendered musical characteristics—to Lightning (*Final Fantasy XIII*) and Noctis (*Final Fantasy XV*), whose themes musically encode alternative femininity and masculinity. As in *Star Wars*, music simultaneously reflects and drives the construction of gender in video games.

Pete Smucker (Stetson University)

"Currencies, Values, and Exchanges of Game Sounds"

Antonio Gramsci's critique of Verdi's operas "recognized that the popular classes picked up certain 'melodramatic tones and attitudes' with passion and sincerity, to the point that they became incorporated into the language" (Salvagni 2013, 264). Similar attitudes may be expressed today regarding the appropriation of video game sounds and music into mainstream media. Borrowing from Gramsci's concept of "hegemony" (Gramsci 1926; Ramos 1982), and Pierre Bourdieu's cultural capital (1986), this paper examines game sounds in terms of currencies, values, and their effects on class.

I pose three questions in order to investigate these aspects. First, how might game sounds acquire value within games or in real life? Second, can these sounds serve as a currency and be exchanged in some manner? Third, is there a way to compare and measure the relative worth of game sounds against each other during gameplay? In order to answer this final question, I develop the concept of "ludic value of game sound currencies." Figure 1 demonstrates one example of this concept in *The Legend of Zelda: Skyward Sword* (2011). Link's harp playing can have little ludic value during most of the game. Certain moments, however, have increased value, such as when Link must pay off a debt musically, rather than with the monetary currency of the game. This and other examples demonstrate how games

sounds might carry different types of values, either within a game or in real life, and potentially affect the relationship between the "gamer class" and other societal classes.

Figure 1. Gameplay screenshot from *The Legend of Zelda: Skyward Sword* (2011). The value of Link's harp playing has little value for much of the game, yet in certain moments Link's music reaches the status of a currency.

Steven Reale (Youngstown State University)

SERENDIPITOUS INTERTEXTUALITY: VIDEO GAMES AND ROYALTY-FREE MUSIC

Internet-based distribution technologies offer "indie" development houses access to the video games marketplace at large, making it possible for shoestring operations to sell their works to a wide audience of gamers. Kevin MacLeod publishes royalty-free music under the label Incompetech, and several indie game developers have taken advantage of this zero-cost option for acquiring musical assets for their games. The pool of MacLeod's compositions on offer being limited, it was likely that the same music would eventually appear in multiple titles. Julia Kristeva has described the "literary word" as "an *intersection of textual surfaces*" (1986, 36). A close neighbor to Michael Klein's "*aleatoric* intertextuality that roams freely through time" (2004, 12), this paper proposes that when such an intersection occurs when works draw independently from a single source, a *serendipitous intertextuality* emerges, inviting signification to diffuse through their nexus point.

This talk considers three games by disparate developers that each feature MacLeod's music: *Small Worlds* (David Shute, 2010), *Kerbal Space Program* (Squad, 2015), and *The Bridge* (The Quantum Astrophysicists Guild, 2013). After positioning the musics within a conceptual integration network that connects them with themes of science-fiction exploration (Zbikowski 2005), the paper shows how the intertextual relationship allows significations from one game to spill over into the others. A player may begin to draw associations and connections between otherwise unrelated gaming experiences, and the serendipitous intertextuality that arises among these games suggests that the player read them against and alongside each other in ways perhaps far beyond the designers' imaginings.

Works Cited

Klein, Michael. 2004. *Intertextuality in Western Art Music*. Bloomington: Indiana

University Press.

Kristeva, Julia. 1986. "Word, Dialogue and Novel." In *The Kristeva Reader*. Ed. Toril Moi, 34–61. New York: Columbia University Press.

Zbikowski, Lawrence. 2005. *Conceptualizing Music: Cognitive Structure, Theory, and Analysis*. Oxford University Press.

John Vinzant (Texas State University)

Sed Non Eodem Modo*: The Origins of Ludomusicology Compared to *Musikwissenschaft

In the past decade, an expanding body of research has been conducted on music in video games, manifest in topic-specific academic conferences and publications, all resulting in the emergent field of study known as ludomusicology. Many prominent scholars who champion the topic do so from research posts at major universities around the world, and have worked to legitimize their work within the larger musicological community. Their efforts arguably are not unlike those carried out by many of musicology's first academics such as Guido Adler and Eduard Hanslick who, according to Kevin Karnes's *Music, Criticism, and the Challenge of History* (2010), sought to apply the philosophy of positivism to what had previously been a more subjective field in order to align themselves with other legitimized academic disciplines such as natural science. By comparing selected writings from nineteenth-century musicologists to twenty-first century ludomusicologists, as well as secondary sources on the significance and impact of this writing and research, I argue that several key similarities between the legitimization processes of the two fields reveal possible archetypes for the founding of new scholarly disciplines. In this presentation, I will review the growing history of scholarly video game music research, recount the accomplishments of some of musicology's most prominent nineteenth-century founders, and explore illuminating connections between the two.

Dana Plank (Ohio State University)

Taking a Gander at the Use of Debussy in *Untitled Goose Game* (2019)

In September 2019, indie game studio House House released *Untitled Goose Game* (*UGG*), in which the titular bird pesters the residents of a quaint English village to snippets of Debussy's *Préludes* that respond directly to the player's actions. Dan Golding's fully-reactive adapted score uses Debussy's music punctuated with copious honking and gentle mayhem driving the residents to their—ahem—beaking point.

This score's effectiveness lies in its sparse simplicity, crafting a sense of childlike innocence rendering the antics more mischievous than antagonistic. The solo piano's open intervals, modal-tinged harmonies, rhythmically-playful syncopations, and dynamic contrasts are so familiar from other children's' media such as *Mister Rogers' Neighborhood* that they are evocative even on a microscopic level. Golding divided "Minstrels" from Book 1 of the *Préludes* into over 400 fragments, two-beat segments of music that could be layered and triggered so the player wouldn't "bulldoze through the kind of micro-narratives of the game." Drawing on scholarship analyzing and contextualizing Debussy's piano preludes as well as recent and forthcoming work on music in children's media by Aaron Manela, Susan Boynton, Daniel Henderson, and Theresa Chafin, this lightning talk will utilize gameplay footage to demonstrate Golding's division of "Minstrels" into specific phrases and stems, and compare this music to that of other children's media. In this talk, I will argue that *UGG's* success lies not only in the impressive level of detail in the implementation of the sound and music, but also in its universal appeal drawing on players' childhood musical memories.

Matthew Olson, "Untitled Goose Game Uses About 400 Different Tracks to Adapt to Your Goose Antics." *USG,* September 24, 2019. https://www.usgamer.net/articles/ untitled-goose-games-uses-about-400-different-tracks-to-adapt-to-your-goose-antics

William O'Hara (Gettysburg College)

Collaboration, Communication, Cancellation: Sound and Music Development in Atari's Film-to-Arcade Adaptations

In the early 1980s, the Atari corporation collaborated with several major studios to create games based on popular franchises, resulting in both commercial successes (like *Star Wars*, 1983) and infamous failures (*E.T. the Extraterrestial*, 1982). Drawing on archival research conducted at the Strong Museum of Play, this paper examines the process of soundtrack development in three Atari arcade titles: *Return of the Jedi* (1983-84), *Gremlins* (1984- 85), and *The Last Starfighter* (1984-86). Development documents from each project reveal the challenges of creating blockbuster adaptations, including the need for secrecy and the competing interests of the engineers, marketing executives, and studios.

Sound and music posed a particular challenge, since film scores are often one of the last elements added during production, leaving a tie-in game's soundtrack full of placeholder assets; sound designers were often shared among projects, or left to speculate about the sounds and dialogue that might appear in the finished movie (as in *Gremlins*, which went into production before the movie was filmed). The developers of *ROTJ*, meanwhile, compiled detailed wishlists of sounds and dialogue samples, drawn from a film that had already been released; the featured speech samples taken from prominent action scenes, but its sound effects were created by Atari. And some adaptations failed: *The Last Starfighter* was re-developed as *Star Raiders II* (1986) after its movie tie-in flopped. *Gremlins* was cancelled before reaching production. From these three case studies, we gain insight into the inter-organizational collaborations behind multimedia franchises, and the uncertainties that often plagued their development.

Jeremy Smith (Arizona State University)

"Wear People's Faces": Semiotic Awareness in Fan Adaptations of the Music from *The Legend of Zelda: Majora's Mask*.

This presentation discusses fan adaptations of music from *The Legend of Zelda: Majora's Mask*, arguing that they maintain the semiotic meaning of the games' original music while changing some structural features to place the original pieces into new stylistic contexts. The musical meaning of the works can be determined through a combination of semiotic and hermeneutic methods, and it is tied to the narrative context associated with the works in the game, which is often sad or anxious in emotional character. Remaking the music into adaptations helps fans of the game contextualize the meaning in new ways and understand how it relates to their own social and emotional circumstances. The adaptations help fans with "world building" and "organizing social life" (DeNora 2000, 44).

After an overview of *Majora's Mask* that situates it within the *Zelda* series and its fandom, I will analyze adaptations of three pieces from the game: "Clock Town," "Song of Healing," and "Stone Tower Temple." The adaptations discussed include amateur remixes and mashups, professional studio productions, covers in different genres, and a full-length opera by M. Bulteau, for which I have score excerpts obtained through online conversations. When making this content, creators "wear people's faces" (like Link does with masks in the game) by taking on the emotional meaning of the works and putting it into new contexts. For example, the adaptation of "Song of Healing" by Rozen (2018) communicates the experience of being emotionally healed through a gradual crescendo, thickening of texture, and ascent in register.

Dickie Lee (University of Georgia)

Interpreting the Music of (8-)Bit Brigade: Speed Runs and Speed Metal

8-bit Nintendo music, with its driving rhythms and readily identifiable thematic characters, lends itself nicely for adaptation into a metal musical *milieu*. And that borrowing, when paired with the visuals of the actual gaming experience, leads to a hermeneutics of video game music that is underexplored in theory and analysis—one that focuses on agency and subjectivity. I analyze the performances of Athens, Georgia metal band Bit Brigade as participating in a nostalgic mode of intertextuality (loosely defined as the act of relating various texts to one another to release meaning), and that nostalgia is underscored by speed run-through visuals of classic games (such as Contra and Metroid) by a professional gamer accompanied by the band performing the soundtrack.

To situate this analysis, I begin with a conceptualization of agency as the capacity for an interpreted being to interact with their virtual environment, and interpret how a venue can demonstrate an acoustemology of its space (an *a priori* association regarding that location and the culture/types of individuals that participate in it). I analyze how Bit Brigade accomplishes seamless transitions with the gaming scenery, ultimately reflecting a degree of agency within the ensemble and the gamer. An intertextual network of associations connect game-to-music and music-to-game in an ever-unfolding act of nostalgia and simulation. Bit Brigade at once teaches us about postmodern philosophy and why these games captured attention in the first place, all in the context of a metal unanticipated musical experience.

References

Baudrillard, Jean. *Simulacra and Simulation* trans. Sheila Faria Glaser. Ann Arbor: The University of Michigan Press, 1994.

Burns Lori and Alyssa Woods. "Authenticity, Appropriation, Signification: Tori Amos on Gender, Race, and Violence in Covers of Billie Holliday and Eminem." *Music Theory Online* 10/2 (2004).

Butler, Mark. "Taking it Seriously: Intertextuality and Authenticity in Two Covers by the Pet Shop Boys." *Popular Music* 22/1 (2003): 1-19.

D'Angelo, Frank J. "The Rhetoric of Intertextuality." *Rhetoric Review* 29/1 (2010): 31-47. Guck, Marian A. "Analytical Fictions." *Music Theory Spectrum* 16/2 (1994): 217-230. Jameson, Frederic. *Postmodernism: Or, the Cultural Logic of Late Capitalism*. Durham, NC: Duke

Klein, Michael L. *Intertextuality in Western Art Music*. Bloomington: Indiana University Press,2005.

Kristeva, Julia. *Séméiôtiké: recherches pour une sémanalyse*. Paris: Edition du Seuil, *1969. Monahan, Seth. "Action and Agency Revisited." Journal of Music Theory 57/2 (2013): 321-71.*

Sakakeeny, Matt. "'Under the Bridge:' An Orientation to Soundscapes in New Orleans." Ethnomusicology 54/1 (2010): 1-27.

Schafer, R. Murray. The Tuning of the World. New York: Knopf, 1977.

Hyeonjin Park (University of California, Los Angeles)

Musically Queering Love in the Monstrous World of *Undertale*

Standard, objective-based gameplay reminds the player of their shortcomings with unsympathetic "game over" screens before giving them the option to try again or quit. However, *Undertale* (2015) differentiates itself by reassuring the player to "stay determined." The game resists other conventional expectations, notably by providing an alternative route to complete the game as a pacifist. This particular route calls for empathy and presents an opportunity for the player to foster loving relationships with the nonhuman inhabitants of the Underground. In doing so, *Undertale* challenges the normalized brute force and violence towards monsters, as well as the one-dimensional depictions of them.

This paper explores the development of queer love and acceptance through *Undertale* 's main leitmotif, "Once Upon a Time," and its connection to the player-character, Frisk. As the game progresses, this leitmotif increasingly intertwines with other characters' and locations' own themes to depict the queer relationships that the player-character establishes in the Underground. The queering of *Undertale* goes beyond canonically queer characters, which includes Frisk, a nonbinary human child, by demonstrating the importance of familial and/or platonic queer loves. This is portrayed in Frisk's journey towards their found family. I argue, ultimately, that the various uses of "Once Upon a Time" represent the evolving actions of love in a supposedly monstrous world that, as it turns out, is a place for the player-character to call "home."

Tim Summers (University of London)

Queer Aesthetics and Game Music, or, Has Video Game Music Always Been Queer?

Research concerning game music and identity has included discussions of gender (Austin, 2018), class (Ivănescu, 2018) and disability (Plank, 2018). This paper addresses issues of queer sexuality. In the spirit of Bonnie Ruberg's *Video Games Have Always Been Queer* (2019), this paper considers how queer aesthetics are important elements of game music. It does so by blending queer games studies (Harper/Adams/Taylor eds, 2018; Ruberg/Shaw eds, 2017) with queer musicology (from McClary, 1991 to Walker, 2015). It considers how game music resists hegemonic logics of musical structures, timbres and identities in games.

Games present an intimate relationship between music and the player: music is connected to the gamer's corporeal engagement. Players use their bodies to affect or resist musical change (in dialogue with the game). As a result, both in composition and during play, games subvert power dynamics of traditional, desire-driven, non- interactive musical structures.

Games frequently challenge dominant timbral aesthetics of perfection and realism, and instead unashamedly prize unrealistic timbres, non-traditional instrumentation, and non-homogenous (diverse) soundworlds. Beyond sonic alterity, these timbres resist the assumed superiority of technologically advanced approaches.

Players may use avatars with radically different identities to their own (including sexual identities). Yet music mediates between character and player. In musically blurring the boundaries between player and avatar, game music presents a non- essentialist perspective on identity beyond affiliation or assimilation.

Illustrated by games including *Tomb Raider* and *2064*, the paper argues for recognizing the 'queering' power of game music, as it challenges linear narratives of progression and homogeneity.

Jordan Sam (University of California, Los Angeles)

Stand by Me: Sounds of Queer Utopias and Homosexual Panic in Final Fantasy XV

When Final Fantasy XV was released in 2016, the JRPG highlighted several new features for the series including both open-world game play and an all-male central cast. The director Hajime Tabata promised the game's characters would be more approachable by showing "what boys do when girls aren't around." Within the U.S. reception—news articles and tumblr pages documented a proliferation of gay fan art and theories, and Internet forums depicted an anxiety among gamers as to whether or not the cast was gay.

Locating my paper within this reception, I'll argue the soundscape works with narrative and gameplay elements to reinforce the Sedgwickian notion of 'homosociality' and the consequent 'homosexual panic'. The theme song, a cover of "Stand by Me" by Florence and

the Machine, through cultural coding evokes a queer sentimentality, while the non-diegetic music depict tropes of cowboy independence. These elements combine with gameplay to emphasize the player's affordances and freedom to explore homosocial relations within the open-world environment. But a disjunction, a shift towards linear gameplay in the second half, punctuates both the fracturing of the party and the emergence of the feminine influence. Combining the representational with the structural illustrates notions of queer temporality and queer space (Bonnie Ruberg). And recreates what literary critic Leslie Fiedler viewed, as the freedom and openness represented by male homosocial/homoerotic bonding, and the threat of the domestic female-dominated society. In turn, making the game a site for sexism, homosociality, and queer fan reclamation within the gaming community.